Bull Trout Final Critical Habitat Justification: Rationale for Why Habitat is Essential, and Documentation of Occupancy

Chapter 5. Coastal Recovery Unit—Hood River Critical Habitat Unit

Chapter 5. Hood River Critical Habitat Unit

The Hood River CHU includes the mainstem Hood River and three major tributaries: Clear Branch Hood River, West Fork Hood River, and East Fork Hood River. Portions of the mainstem Columbia River utilized as FMO by Hood River bull trout are discussed in the Lower Columbia River Mainstem CHU section of this document.

The Hood River CHU, located on the western slopes of the Cascades Mountains in northwest Oregon, lies entirely within Hood River County, Oregon. Currently there are two local populations (Clear Branch Hood River above Clear Branch Dam and Hood River and tributaries below Clear Branch Dam) identified as essential to the conservation and recovery (Service 2002a, pg. 7) of bull trout. Also identified are additional areas, including the West Fork Hood River and tributaries, where establishing additional local populations is essential for bull trout recovery. Bull trout in the Hood River CHU are believed to be at substantial risk, numbering less than 100 adult fish and emphasizing the need to establish additional local populations (ODFW 2007a, pg. 12-13).

Critical habitat within the Hood River Basin includes the mainstem Hood River and two major tributaries: the Middle Fork Hood River, and the West Fork Hood River. Although the recovery unit includes the Sandy River, which is known to be occupied based on recent sightings, there is insufficient information at present to identify local populations, or describe bull trout habitat use in the Sandy River subbasin, therefore, no critical habitat is designated.

Seven Guiding Principles Framework for Critical Habitat designation:

- 1. Conserve opportunity for diverse life-history expression The Hood River bull trout population contains both adfluvial and fluvial life history types. Because of the Hood River bull trout's unique genetic diversity (see #2 below), it is likely that before passage barriers were present, the population had a unique fluvial life history strategy connecting widely divergent habitats across a broad geographic range. The Hood River habitat may have served as an important connectivity area for highly fluvial fish from both the coastal and Snake River/upper Columbia River groupings of bull trout (Spruell et al., 2003).
- 2. Conserve opportunity for genetic diversity- Genetic analysis of Hood River bull trout indicate that the population is uniquely different from others in the coastal grouping of bull trout (Spruell et al., 2003). Hood River bull trout contain an allele the is absent from other populations in the coastal linage and is found with high frequency in Snake River and Upper Columbia River populations suggesting that colonizers from both the Snake and Upper Columbia have contributed to the Hood River population. The preservation of this unique genotype provides significant opportunity for genetic diversity.
- 3. Ensure bull trout are distributed across representative habitats Bull trout in the Hood river basin occupy a unique environment that is naturally stochastic. The glaciers that form some of the rivers fluctuate dramatically in diurnal cycles in flow, turbidity, and temperature. The unique ability of Hood River bull trout to adapt to this unpredictable environment separates and differentiates them from other bull trout in the coastal lineage of bull trout and represents a unique habitat type.
- 4. Ensure sufficient connectivity among populations –As discussed in #2 above, the Hood River bull trout are unique in that they possess alleles from both the Snake and Upper Columbia River

basins. It is likely that colonizers from both the costal grouping of bull trout and the Snake/Upper Columbia River contributed to the population. The presence of this unique set of alleles may also suggest that the Hood River serves as an important connectivity habitat among divergent (both genetically and geographically) populations.

- 5. Ensure sufficient habitat to support population viability (e.g., abundance, trend indices) Over 90 percent of the Hood River bull trout population is contained in Clear Branch above Laurance Lake. The amount of habitat above the lake is very limited, 2.1 miles. It is not likely that this population will be recovered with such limited habitat. Several significant efforts are underway that will restore passage at several major barriers that will increase the available amount of habitat by orders of magnitude. Once passage is restored, bull trout will be able to access the West Fork Hood River (and tributaries), the East Fork Hood River, the mainstem Hood River, and the mainstem Columbia River that connects to other basins containing bull trout (Deschutes River, Klickitat River, Little White Salmon River, Lewis River). The Hood River bull trout population may be one of the most recoverable bull trout populations in Oregon.
- 6. Consider threats (e.g., climate change)- Although many, if not most threats to Hood River bull trout are being actively rectified, but the stochastic nature of glacial outbursts and habitat altering flow events will continue to significantly alter Middle Fork Hood River Tributaries. This significant habitat altering events will likely be exacerbated by any future effects from climate change. The West Fork Hood River basin is significantly less stochastic and will serve an important role as an alternative or refugia habitat.
- 7. Ensure sufficient redundancy in conserving population units Because there are so few bull trout populations on the west side of the Cascade range in Oregon, little redundancy exists. The Hood River population is necessary to provide what little redundancy exists.

The following water bodies are included in this CHU (see Table 28)

Hood River from the Columbia River upstream 23.7 km (14.7 mi) to its confluence with the east and middle forks provides FMO habitat, as well as connectivity with the mainstem Columbia River.

Currently, this segment is known to be occupied, and provides foraging, migration, and overwintering (FMO) habitat, as well as connectivity with the mainstem Columbia River. Improving fish passage and diversion screening (Recovery Tasks 1.2.3 and 1.2.6) is identified to assist maintaining and improving habitat conditions in this segment (Service 2002a, pg. 43).

East Fork Hood River from the confluence of the Hood River upstream 3.6 km (2.4 mi) is FMO habitat. This segment is essential due to being currently occupied and providing potential spawning/rearing habitat and FMO habitat for the Hood River local population (ODFW 2007a).

Middle Fork Hood River from its confluence with the Hood River upstream 15.4 km (9.6 mi) to its confluence with Coe Branch provides spawning and rearing habitat for the Hood River local population. This segment is essential due to being currently occupied and providing spawning/rearing habitat and FMO habitat for the Hood River local population.

Tony Creek from its confluence with the Middle Fork Hood River upstream approximately 12.5 km (7.75 mi) where a 12-foot falls is a barrier to fish passage. Salmonids were observed in this reach during a 1996 USFS stream survey. The Draft Recovery Plan (Service 2002a) states that a radio-tagged bull trout was tracked in Tony Creek in 1998. Since 1998, fish passage at a Tony Creek diversion has been modified. Biologists from the Confederated Tribes of the Warm

Springs observed two adult bull trout in Tony Creek on 10/7/09. One was a redd at RM 0.4 and one was by the Tony Creek diversion at RM 0.7 (USFS in litt. 2010b).

Bear Creek from the Middle Fork Hood River confluence upstream approximately 7.75 miles, where a 12-foot falls is a barrier to fish passage. The lower 1.3 km (0.8 mi) to its confluence with an unnamed tributary is occupied and provides spawning and rearing habitat for the Hood River local population. The creek above this unnamed tributary is unoccupied FMO habitat. It is essential due to being occupied near the confluence of Bear Creek and Middle Fork Hood River (although occupancy is variable) and providing spawning and rearing habitat for the Hood River local population. The Draft Recovery Plan (Service 2002a) states that a radio-tagged bull trout was tracked in Tony Creek in 1998. Since 1998, fish passage at a Tony Creek diversion has been improved. Biologists from the Confederated Tribes of the Warm Springs observed two adult bull trout in Tony Creek on October 7, 2009. One was a redd at RM 0.4 and one was by the Tony Creek diversion at RM 0.7 (USFS in litt. 2010b).

Elliot Branch from the Middle Fork Hood River confluence upstream 1.3 km (0.8 mi) to a passable diversion is occupied and provides spawning and rearing habitat for the Hood River local population.

Coe Branch from the Middle Fork Hood River confluence upstream 3.9 km (2.4 mi) to its confluence with near Compass Creek is occupied, provides spawning/rearing habitat for the Hood River local population, and provides FMO habitat between spawning and rearing habitat in Compass Creek and the Middle Fork Hood River.

Compass Creek from the confluence with Coe Branch upstream 4.3 km (2.7 mi) to its headwaters provides spawning and rearing habitat for the Hood River local population.

Clear Branch from the confluence with the Middle Fork Hood River upstream 1.4 km (0.9 mi) to Clear Branch Dam provides FMO and spawning and rearing habitat. Clear Branch above Laurance Lake upstream 5.0 km (3.1 mi) to the confluence with two unnamed tributaries (near 45-foot impassable falls) is occupied habitat providing spawning and rearing habitat for the Clear Branch local population. This segment is known occupied and essential for providing migration and spawning and rearing habitat to the Clear Branch local population. Nearly the entire population of bull trout within the Hood River basin is contained within this tributary of the Hood River.

Unnamed Creek from the confluence with Clear Branch upstream 0.15 km (0.09 mi) provides SR habitat to the Clear Branch local population. Nearly the entire population of bull trout within the Hood River basin is contained within this tributary of the Hood River.

Laurance Lake, with a surface area of 37 ha (91 ac), provides rearing habitat for the Clear Branch local population. Laurance Lake is used for FMO and some rearing, with spawning occurring upstream in Clear Branch Hood River and also Pinnacle Creek. This segment is known occupied and essential for providing rearing habitat and FMO habitat to the Clear Branch local population.

Pinnacle Creek from the confluence with Laurance Lake upstream 3.25 km (2.02 mi) to a gradient barrier is occupied and provides spawning and rearing habitat for the Clear Branch local population.

West Fork Hood River from the Hood River confluence upstream 23.2 km (14.4 mi) to the confluence with Elk and McGee Creeks provides potential FMO habitat. The West Fork Hood

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River is considered unoccupied at this time, but sightings from trap information and radiotracking efforts in 2007 were documented at the fish ladder on Punchbowl Falls (Service 2002a, pg. 9 and ODFW 2007a, pg 8.). This habitat is essential for establishing additional reproducing local population(s) in the West Fork Hood River, which is essential to the long-term conservation of the species and is identified as an action needed to recovery Hood River bull trout (recovery criteria #1, expand present distribution into suitable habitat in the core area, and tasks 1.2.7 and 3.1.5; Service 2002a, pg. 36, 43, 46). We believe the West Fork Hood River watershed (including the West Fork Hood River, Lake Branch, Divers Creek, Laurel Creek, Red Hill Creek, and Elk Creek) is necessary for population expansion and should be designated as critical habitat. The Hood Recovery Unit Team has identified the West Fork Hood River as essential to recovery of bull trout and is considered a potential local population in the recovery plan. The plan recognizes that in a recovered condition the Hood River Core Area will include up to four local populations, including the West Fork Hood River. Currently bull trout numbers are severely depressed. Although accurate bull trout adult abundance estimates for the Hood River Core have only recently become available, the total number of bull trout adults is approximately 100 (ODFW 2007a, pg 12-13). This low adult abundance in the Hood River Core Area places it at high risk from genetic drift. It is likely that both of the two local populations is currently at risk from inbreeding depression given the overall low abundance within the core area and constitutes a serious threat to their long term persistence. Recovery is expected within existing population complexes, and through expansion to other areas, such as the West Fork Hood River, as recovery progresses. There have been sightings of bull trout in the West Fork Hood River, one at Punchbowl falls in 1963, one in a smolt trap at the mouth of Lake Branch in 1997, and radio-tracking efforts detected bull trout in 2007, ODFW 2007a, pg 8). Based on temperature observations from U.S. Forest Service (USFS 1996c pg. 5-56) suitable bull trout habitat is present in the West Fork Hood River mainstem and bull trout were historically distributed in a short reach of the West Fork Hood River (Buchanan et al. 1997, pg. 47). Current bull trout use of the West Fork Hood River is thought to be primarily for foraging, migration, and overwintering.

Lake Branch from the confluence with the West Fork Hood River upstream 4.2 km (2.6 mi) to its confluence with Laurel Creek is unoccupied FMO habitat. Establishing additional local population(s) in the West Fork Hood River is identified as an action necessary to achieve recovery. Lake Branch would serve as potential FMO habitat linking Laurel and Divers Creeks, both identified by the U.S. Forest Service (USFS 1996c, pg. 5-56) as having suitable water temperatures to provide spawning habitat. The draft recovery plan identified establishing addition local populations within the core area as a recovery objective (see tasks 1.2.7 and 3.1.5).

Laurel Creek from the Lake Branch confluence upstream approximately 5.8 km (3.6 mi) to an impassable falls at its headwaters is essential to provide potential FMO habitat for supporting additional local populations in this core area (Service 2002a pg. 36). Current occupancy is unknown.

Red Hill Creek from the West Fork Hood River confluence upstream approximately 5.5 km (3.4 mi) to an impassable falls at its headwaters is essential to provide FMO habitat to support additional local populations, which will be essential to recovery. Current occupancy is unknown. (Service 2002a pg. 36) and tasks 1.2.7 and 3.1.5 (Service 2002a, pg.43, 46).

Elk Creek from the West Fork Hood River confluence upstream 6.6 km (4.1 mi) to its headwaters at a bedrock waterfall barrier provides potential FMO habitat to support a local

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population that is identified in the Draft Recovery Plan as essential to achieving recovery(Service 2002a pg. 36) and tasks 1.2.7 and 3.1.5 (Service 2002a, pg.43,46). Current occupancy is unknown.

Jones Creek from the West Fork Hood River confluence upstream approximately 1.5 miles where stream gradient increases provides (unoccupied) potential FMO habitat. Salmonids were observed from the mouth to RM 1.5 in a 2000 USFS stream survey. There are two barrier waterfalls at RM 2.75 (22 feet and 23 feet high, respectively). The 7-day maximum temperature at the mouth was below 13 degrees C. Jones Creek also has some of the best habitat in the upper West Fork Hood River (USFS, in litt., 2010b).

McGee Creek from the West Fork Hood River confluence upstream approximately 3.5 miles, where a high gradient cascading riffle may limit fish passage upstream (USFS 1996c). This creek provides (unoccupied) potential FMO habitat. There are no barriers to fish passage in McGee Creek up to this point. It has some of the best habitat in the upper West Fork Hood River and the average 7-day temperature was 11.2 degrees C (USFS 1996c; USFS, in litt. 2010b).

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Table~28.~Water~body~segments~designated~as~critical~habitat~for~bull~trout, including~documentation~of~occupancy~and~site-specific~rationale~in~the~Hood~River~CHU/CHSU

CHU—CHSU	Water Body Name	State	Information Documenting Bull Trout Occupancy	Essential Habitat Rationale	LLID
Hood River— None	Bear Creek	OR	Bear Creek from the Middle Fork Hood River confluence upstream approximately 7.75 miles, where a 12-foot falls is a barrier to fish passage. The lower 1.3 km (0.8 mi) to its confluence with an unnamed tributary is occupied and provides spawning and rearing habitat for the Hood River local population. The creek above this unnamed tributary is unoccupied FMO habitat. It is essential due to being occupied near the confluence of Bear Creek and Middle Fork Hood River (although occupancy is variable) and providing spawning and rearing habitat for the Hood River local population. The Draft Recovery Plan (Service 2002a) states that a radio-tagged bull trout was tracked in Tony Creek in 1998. Since 1998, fish passage at a Tony Creek diversion has been improved. Biologists from the Confederated Tribes of the Warm Springs observed two adult bull trout in Tony Creek on October 7, 2009. One was a redd at RM 0.4 and one was by the Tony Creek diversion at RM 0.7 (USFS, in litt. 2010b).	See text for this CHU	1226816 438721
Hood River— None	Clear Branch	OR	Clear Branch from the confluence with the Middle Fork Hood River upstream 1.4 km (0.9 mi) to Clear Branch Dam provides FMO and spawning and rearing habitat. Clear Branch above Laurance Lake upstream 5.0 km (3.1 mi) to the confluence with two unnamed tributaries (near 45-foot impassable falls) is occupied habitat providing spawning and rearing habitat for the Clear Branch local population. This segment is known occupied and essential for providing migration and spawning and rearing habitat to the Clear Branch local population. Nearly the entire population of bull trout within the Hood River basin is contained within this tributary of the Hood River.	See text for this CHU	1220481 442769
Hood River— None	Coe Branch	OR	Coe Branch from the Middle Fork Hood River confluence upstream 3.9 km (2.4 mi) to its confluence with near Compass Creek is occupied, provides spawning/rearing habitat for the Hood River local population, and provides FMO habitat between spawning and rearing habitat in Compass Creek and the Middle Fork Hood River.	See text for this CHU	1216303 454986

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CHU—CHSU	Water Body Name	State	Information Documenting Bull Trout Occupancy	Essential Habitat Rationale	LLID
Hood River— None	Compass Creek	OR	Compass Creek from the confluence with Coe Branch upstream 4.3 km (2.7 mi) to its headwaters provides spawning and rearing habitat for the Hood River local population.	See text for this CHU	1216684 454340
Hood River— None	East Fork Hood River	OR	East Fork Hood River from the confluence of the Hood River upstream 3.6 km (2.4 mi) is FMO habitat. This segment is essential due to being currently occupied and providing potential spawning/rearing habitat and FMO habitat for the Hood River local population (ODFW 2007a).	See text for this CHU	1216272 455754
Hood River— None	Elk Creek	OR	Elk Creek from the West Fork Hood River confluence upstream 6.6 km (4.1 mi) to its headwaters at a bedrock waterfall barrier provides potential FMO habitat to support a local population that is identified in the Draft Recovery Plan as essential to achieving recovery(Service 2002a pg. 36) and tasks 1.2.7 and 3.1.5 (Service 2002a, pg.43,46). Current occupancy is unknown.	See text for this CHU	1217818 454562
Hood River— None	Elliot Creek	OR	Elliot Creek from the Middle Fork Hood River confluence upstream 1.3 km (0.8 mi) to a passable diversion is occupied and provides spawning and rearing habitat for the Hood River local population.	See text for this CHU	1216272 455754.1
Hood River— None	Hood River	OR	Hood River from the Columbia River upstream 23.7 km (14.7 mi) to its confluence with the east and middle forks provides FMO habitat, as well as connectivity with the mainstem Columbia River. Currently, this segment is known to be occupied, and provides foraging, migration, and overwintering (FMO) habitat, as well as connectivity with the mainstem Columbia River. Improving fish passage and diversion screening (Recovery Tasks 1.2.3 and 1.2.6) is identified to assist maintaining and improving habitat conditions in this segment (Service 2002a, pg. 43).	See text for this CHU	1217818 454562

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CHU—CHSU	Water Body Name	State	Information Documenting Bull Trout Occupancy	Essential Habitat Rationale	LLID
Hood River— None	Jones Creek	OR	Jones Creek from the West Fork Hood River confluence upstream approximately 1.5 miles where stream gradient increases provides (unoccupied) potential FMO habitat. Salmonids were observed from the mouth to RM 1.5 in a 2000 USFS stream survey. There are two barrier waterfalls at RM 2.75 (22 feet and 23 feet high, respectively). The 7-day maximum temperature at the mouth was below 13 degrees C. Jones Creek also has some of the best habitat in the upper West Fork Hood River (USFS, in litt., 2010b).	See text for this CHU	1217820 454620
Hood River— None	Lake Branch	OR	Lake Branch from the confluence with the West Fork Hood River upstream 4.2 km (2.6 mi) to its confluence with Laurel Creek is unoccupied FMO habitat. Establishing additional local population(s) in the West Fork Hood River is identified as an action necessary to achieve recovery. Lake Branch would serve as potential FMO habitat linking Laurel and Divers Creeks, both identified by the U.S. Forest Service (USFS 1996c, pg. 5-56) as having suitable water temperatures to provide spawning habitat. The draft recovery plan identified establishing addition local populations within the core area as a recovery objective (see tasks 1.2.7 and 3.1.5).	See text for this CHU	1217031 455483
Hood River— None	Laurel Creek	OR	Laurel Creek from the Lake Branch confluence upstream approximately 5.8 km (3.6 mi) to an impassable falls at its headwaters is essential to provide potential FMO habitat for supporting additional local populations in this core area (Service 2002a pg. 36). Current occupancy is unknown.	See text for this CHU	1217031 455483.1
Hood River— None	Middle Fork Hood River	OR	Middle Fork Hood River from its confluence with the Hood River upstream 15.4 km (9.6 mi) to its confluence with Coe Branch provides spawning and rearing habitat for the Hood River local population. This segment is essential due to being currently occupied and providing spawning/rearing habitat and FMO habitat for the Hood River local population.	See text for this CHU	1217031 455483.2

СНИ—СНЅИ	Water Body Name	State	Information Documenting Bull Trout Occupancy	Essential Habitat Rationale	LLID
Hood River— None	McGee Creek	OR	McGee Creek from the West Fork Hood River confluence upstream approximately 3.5 miles, where a high gradient cascading riffle may limit fish passage upstream (1997 USFS stream survey). This creek provides (unoccupied) potential FMO habitat. There are no barriers to fish passage in McGee Creek up to this point. It has some of the best habitat in the upper West Fork Hood River and the average 7-day temperature was 11.2 degrees C (USFS 1996c; USFS 2010b).	See text for this CHU	1217818 454561
Hood River— None	Pinnacle Creek	OR	Pinnacle Creek from the confluence with Laurance Lake upstream 3.25 km (2.02 mi) to a gradient barrier is occupied and provides spawning and rearing habitat for the Clear Branch local population.	See text for this CHU	1217430 455392
Hood River— None	Red Hill Creek	OR	Red Hill Creek from the West Fork Hood River confluence upstream approximately 5.5 km (3.4 mi) to an impassable falls at its headwaters is essential to provide FMO habitat to support additional local populations, which will be essential to recovery. Current occupancy is unknown. (Service 2002a pg. 36) and tasks 1.2.7 and 3.1.5 (Service 2002a, pg.43, 46).	See text for this CHU	1216272 455753
Hood River— None	Tony Creek	OR	Tony Creek from its confluence with the Middle Fork Hood River upstream approximately 12.5 km (7.75 mi) where a 12-foot falls is a barrier to fish passage. Salmonids were observed in this reach during a 1996 USFS stream survey. The Draft Recovery Plan (Service 2002a), states that a radio-tagged bull trout was tracked in Tony Creek in 1998. Since 1998, fish passage at a Tony Creek diversion has been modified. Biologists from the Confederated Tribes of the Warm Springs observed two adult bull trout in Tony Creek on 10/7/09. One was a redd at RM 0.4 and one was by the Tony Creek diversion at RM 0.7 (USFS, in litt. 2010b).	See text for this CHU	1216390 455534
Hood River— None	UNNAMED - off Clear Branch	OR	Unnamed Creek from the confluence with Clear Branch upstream 0.15 km (0.09 mi) provides SR habitat to the Clear Branch local population. Nearly the entire population of bull trout within the Hood River basin is contained within this tributary of the Hood River.	See text for this CHU	1216459 454629
Hood River— None	West Fork Hood River	OR	West Fork Hood River from the Hood River confluence upstream 23.2 km (14.4 mi) to the confluence with Elk and McGee Creeks provides potential FMO habitat. The	See text for this CHU	1217699 454830

CHU—CHSU	Water Body Name	State	Information Documenting Bull Trout Occupancy	Essential Habitat Rationale	LLID
			West Fork Hood River is considered unoccupied at this		
			time, but sightings from trap information and radio-		
			tracking efforts in 2007 were documented at the fish		
			ladder on Punchbowl Falls (Service 2002a, pg. 9 and		
			ODFW 2007a, pg 8.). This habitat is essential for		
			establishing additional reproducing local population(s) in		
			the West Fork Hood River, which is essential to the long-		
			term conservation of the species and is identified as an		
			action needed to recovery Hood River bull trout (recovery		
			criteria #1, expand present distribution into suitable		
			habitat in the core area, and tasks 1.2.7 and 3.1.5;		
			Service 2002a, pg. 36, 43, 46). We believe the West Fork		
			Hood River watershed (including the West Fork Hood		
			River, Lake Branch, Divers Creek, Laurel Creek, Red Hill		
			Creek, and Elk Creek) is necessary for population		
			expansion and should be designated as critical habitat.		
			The Hood Recovery Unit Team has identified the West		
			Fork Hood River as essential to recovery of bull trout and		
			is considered a potential local population in the recovery		
			plan. The plan recognizes that in a recovered condition		
			the Hood River Core Area will include up to four local		
			populations, including the West Fork Hood River.		
			Currently bull trout numbers are severely depressed.		
			Although accurate bull trout adult abundance estimates for		
			the Hood River Core have only recently become available,		
			the total number of bull trout adults is approximately 100		
			(ODFW 2007a, pg 12-13). This low adult abundance in		
			the Hood River Core Area places it at high risk from		
			genetic drift. It is likely that both of the two local		
			populations is currently at risk from inbreeding depression given the overall low abundance within the core area and		
			constitutes a serious threat to their long term persistence.		
			Recovery is expected within existing population		
			complexes, and through expansion to other areas, such as		
			the West Fork Hood River, as recovery progresses. There		
			have been sightings of bull trout in the West Fork Hood		
			River, one at Punchbowl falls in 1963, one in a smolt trap		
			at the mouth of Lake Branch in 1997, and radio-tracking		
			efforts detected bull trout in 2007 (ODFW 2007a, pg 8).		
			Based on temperature observations from U.S. Forest		
			Service (USFS 1996c pg. 5-56) suitable bull trout habitat		
			is present in the West Fork Hood River mainstem and bull		

CHU—CHSU	Water Body Name	State	Information Documenting Bull Trout Occupancy	Essential Habitat Rationale	LLID
			trout were historically distributed in a short reach of the West Fork Hood River (Buchanan et al. 1997, pg. 47). Current bull trout use of the West Fork Hood River is thought to be primarily for foraging, migration, and overwintering.		
Hood River— None	Laurance Lake	OR	Laurance Lake, with a surface area of 37 ha (91 ac), provides rearing habitat for the Clear Branch local population. Laurance Lake is used for FMO and some rearing, with spawning occurring upstream in Clear Branch Hood River and also Pinnacle Creek. This segment is known occupied and essential for providing rearing habitat and FMO habitat to the Clear Branch local population.	See text for this CHU	1217006 454477